ENERGY POLICY UPDATE

December 23, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email Gloria Castro.

UPCOMING WEBINARS

- ENERGY STAR Webinars
- U.S. Dept. of Energy Tribal Renewable Energy Webinar Series for 2014
- Transitioning to NERC CIPv5: What Does it Mean for Electric Utilities
  Wed., January 28, 2015
  10:00am - 11:00am PT /
  1:00pm - 2:00pm ET Click here to register.
  Webinar Partners: EnergySec and MetricStream

2015 UPCOMING EVENTS

NAHB Int'l. Builders' Show
Jan. 20-22 Las Vegas, NV

ASHRAE Winter Conference
Jan. 24-28 Chicago, IL

Getting to ZERO Nat'l. Forum
Feb. 1-3 Washington, DC

NASEO Energy Policy Outlook Conference 2015
Feb. 3-6 Washington, DC

Solar Power Generation USA
Feb. 4-5 San Diego, CA

Energy, Utility & Environment Conference (EUEC) 2015
Feb. 16-18 San Diego, CA

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ARIZONA-RELATED

APS Customers' Bills To Rise After Four Corners Purchase

[Associated Press, Dec. 19] After more than four years of negotiations, Arizona Public Service Co. will begin charging customers in January for its purchase of a larger stake in the Four Corners Power Plant outside Farmington, N.M. The average residential customer will see bills increase by an average of $2.54 per month to pay for the purchase. APS proposed in November 2010 buying out Southern California Edison's share in the two newer generators at the plant, and closing the three older, dirtier generators. Like other California regulated utilities, SCE was prevented by state law from investing in power plants that don't meet environmental standards related to global warming. Units 4 and 5 opened in 1969-70. The newer units are larger and cleaner-burning. APS owned 15 percent of Units 4 and 5 and bought an additional 48 percent stake in them from SCE. PNM Resources Inc. of New Mexico, Salt River Project, El Paso Electric and Tucson Electric Power also own minority stakes in Units 4 and 5. Units 1, 2 and 3, which APS closed a year ago, opened in 1963-64. The Arizona Corporation Commission, which sets rates for regulated utilities such as APS, approved the rate hike as part of the usual end-of-the year push to close pending issues, especially before two new members join the five-person commission in January.

APS Will Move Ahead with Free Solar

[Arizona Republic, Dec. 19] Arizona's elected utility regulators didn't approve a program for Arizona Public Service Co. to give free solar to 1,500 customers Friday, but the company will do it anyhow. The five Arizona Corporation Commissioners agreed that APS does not need additional solar power in any form, on rooftops or in large power plants, to meet the state requirements for renewable energy. But they voted 4-1 on a motion that said the commission "has no objection" to APS spending $28.5 million on a research project where APS owns the solar and pays participants $30 a month for the use of their roof. APS must target the program toward low-income customers, and officials anticipate rolling out program details in the next few months. About 2,000 customers already have shown an interest in participating. APS will experiment with facing solar panels to the west, which will generate less electricity throughout the

Sustainability Solutions Festival
Feb. 16-21

GreenBiz 2015
Feb. 17-19 Phoenix, AZ

GreenBiz Forum 2015
Feb. 17-19 Phoenix, AZ

2015 Sustainability Solution Festival
Feb. 17-22 Phoenix, AZ

Natural Gas Vehicles + Infrastructure
Mar. 10-11 Phoenix, AZ

GLOBALCON Conference & Expo
Mar. 17-18 Philadelphia, PA

Solar Summit 2015
Apr. 14-15 Phoenix, AZ

Utility Solar Conference
Apr. 27-29 San Diego, CA

CxENERGY 2015 Conference & Expo
Apr. 27-30 Las Vegas, NV

Alternative Clean Transportation (ACT) Expo
May 4-7 Dallas, TX

Solar Power Generation Mexico
May 19-20
World Trade Center, Mexico

Energy Efficiency Finance Forum
May 31-Jun. 2 San Francisco, CA

West Coast Energy Management Congress (EMC)
Jun. 3-4 Long Beach, CA

ASHRAE Annual Conference
Jun. 27-Jul.1 Atlanta, GA

RES Las Vegas
Mar. 9-12 Las Vegas, NV

ACEEE Summer Study on Energy Efficiency in Industry
Aug. 4-6 Buffalo, NY

Solar Power Int'l. 2015
Sep. 14-17 Anaheim, CA

ACEEE National Conference on Energy Efficiency as a Resource
Sep. 20-22 Little Rock, AR

year, but more on hot summer afternoons when the utility most needs the energy. It also will experiment with equipment that regulates voltage on the utility feeder lines, which can be a problem when many people in a neighborhood use solar.

Congress Approves Colossal Ariz. Copper Mine

[Arizona Republic, Dec. 12] A colossal copper mine that could pump billions into the Arizona economy is charging ahead, after nearly a decade of Washington roadblocks. In a rush of votes Friday, the Senate passed the measure 89-11 before the Christmas recess. The federal land swap paves the way for the mine to be built near Superior. It is expected to produce a quarter of the current annual demand for copper in the United States, though its output would be sold throughout the world. The bill was tucked into the must-pass Defense Department spending measure, along with a package of other public land bills, drawing criticism from lawmakers who wanted the unrelated provisions considered separately. Their efforts to derail the bill went nowhere. Supporters on both sides of the aisle, who have watched the mine legislation fail over five sessions of Congress, hailed its passage as a boon for the Arizona economy. The mine would tap the largest copper deposit ever discovered in North America. The company, Resolution Copper, estimates it could create 3,700 jobs near Superior and more than $61 billion in economic benefit to the state.

Solar Wind Energy Tower, Inc. Moves Tower Projects Forward in Mexico and Arizona

[MarketWatch, Dec. 17] Annapolis, MD - Solar Wind Energy Tower, Inc. (otcqb:SWET) (the "Company"), the inventor of large Solar Wind Downdraft Tower structures capable of producing abundant, inexpensive electricity, today announced an update on its Tower Projects in San Luis, Arizona and in San Luis Rio Colorado, Sonora, Mexico including the extension of Agreements for both Tower sites. As announced on October 2, 2014 the Company entered into a "Letter of Understanding" to purchase a 1,250 acre site from a private land owner in San Luis Rio Colorado, Sonora, just across the border from its first tower site in San Luis, Arizona. The Company's executed "Letter of Understanding" with the private land owner calls for definitive documents covering specific purchase terms and is subject to the following two conditions: The First Condition: calls for the provision of all of the necessary entitlements and a Water Supply Agreement to support the operation of the Tower. The Second Condition: calls for assistance in securing the necessary Power Purchase Agreements (PPA's) in support of the financing for the Tower Project. Over the past few months, the Company has worked very closely with city officials from San Luis Rio Colorado, Sonora Mexico who have committed to provide all of the necessary entitlements and water supply to operate the Tower in Mexico, and are assisting the Company in securing the necessary Power Purchase Agreements. The Company has been very pleased with the development efforts so far and in turn, has agreed to extend the Agreement for an additional 6 months until June 30, 2015 for the landowner to satisfy the Second condition prior to moving forward with the Tower's development.

SRP Releases Details of Proposed Rate Hike

[Arizona Republic, Dec. 16] Salt River Project officials are asking the utility's elected board of directors for a $110 million annual increase in rates that would kick in this spring, mostly to pay for coal and gas plants. A customer using 1,110 kilowatt-hours a month on the basic price plan (E-23) would see bills increase $4.61 a month. However, because customers use much more electricity in the summer than the winter, the increases will be greater during the warmer months. For basic price plan customers, the average summer bill would increase to $181.46 from $175.25 today. Winter bills would increase to $84.25 from $81.25 today.

TEP To Offer Residents Rooftop Solar, Expanding Local Renewable Resources

[Tucson Electric Power website, Dec. 18] Tucson, Ariz**.** — Tucson Electric Power (TEP) has received regulatory approval for a plan to install rooftop solar panels at customers' homes and provide their electric service for a set monthly fee that would remain fixed for up to 25 years. TEP's Residential Solar Program, approved today by the Arizona Corporation Commission (ACC), will let customers go solar with no installation or maintenance costs. After paying a $250 administrative fee, participants will pay a fixed monthly electric rate that roughly matches their current average bills, generating significant savings if TEP's rates or energy costs increase in the future. "This innovative program will expand the availability of solar power across our community at a stable, affordable price without compromising the reliability of our electric system," said Philip J. Dion, TEP's Senior Vice President of Public Policy and Customer Solutions. The first-of-its-kind program will be made available next spring to 500-600 customers in 2015. The company will seek participants in areas where TEP's solar arrays would maximize benefits for the local electric grid that serves all customers. System size requirements, proximity to the grid and opportunities to integrate advanced inverter technologies will be considered. TEP will also look for sites where solar panels can be positioned to maximize output that more closely coincides with peak

World Energy Engineering Congress (WEEC)
Sep. 30-Oct. 2 2015
Orlando, FL

ASU Sustainability Series Events

Green Building Lecture Series
Scottsdale, AZ

demand. TEP will partner with local solar companies to install and maintain the systems, contributing to Arizona's growing green energy economy. By installing the most cost-effective, reliable rooftop solar systems possible, the program will provide superior community and customer benefits.

Utilities and Solar Groups Both Claiming Victory in Arizona Rooftop Showdown

[PV-Tech.org, Dec. 22] Both sides in a dispute over a plan by utilities in Arizona to increase their share of the rooftop solar market have claimed victory, as the proposals were approved, but in significantly amended form. The US state's utility regulator, Arizona Corporation Commission (ACC), ruled that Tucson Electric Power and Arizona Public Service will be allowed to proceed with plans to install solar on their customers' rooftops, at no upfront cost to those customers, instead paying them a small monthly fee for doing so. However, the utility companies must introduce their respective programmes at a reduced scale to original proposals, which would have seen them installing around 30MW of solar across 3,000 residential rooftops. Instead, the companies will be allowed to run their schemes as pilot programmes, installing only around two-thirds that number of installations in total. They will be permitted to charge a monthly fee that is around the same rate as residents are currently paying as electricity bills, but which will be fixed for 25 years. The TEP and APS plans vary slightly, with APS offering a small rebate to homeowners who host utility-owned PV systems and no upfront cost, while TEP is asking for a US$250 initial connection fee. Neither, however, has been allowed to proceed with plans to charge all their ratepayers to recover the costs of implementation. In addition, the utilities have also been instructed by ACC that the programmes must be used as trials of the impact of rooftop solar generation being fed into the region's grid networks. The issue of grid connection, and the impact on supply and demand and grid frequency of increased solar PV penetration, has previously been cited by utilities as a reason for their apprehension toward solar in some instances. The utilities had also asked for the freedom to pick and choose which customers would be eligible for the schemes, but has been given certain limitations.

ALTERNATIVE ENERGY & EFFICIENCY

$4B To Upgrade Nebraska Transmission System for Exporting Wind Power

[Smart Grid News, Dec. 17] If Nebraska wants to sell wind power out of state, it will cost up to $4 billion in transmission line upgrades to do it. That figure is from an analysis the Nebraska Power Review Board issued earlier this week. The analysis, provided to the review board by the Brattle Group, also had several other cautions if exporting wind-generated power is to be seriously considered. Nebraska has added and will continue to add wind power. It is a state where wind energy is well thought of as a way to ensure energy independence and create jobs. The Nebraska Public Power District is closing in on its target of 10 percent renewable energy, mostly wind, by 2020, and the Omaha Public Power District eventually wants to have wind as 30 percent of its energy mix. So in a way, it makes sense for the state to want to export it. While the Brattle Group analysis did not say it was a bad idea, it did point out several challenges and areas where policies and other elements would need to be changed if the state is to commit to upgrading its transmission system to accommodate an "ambitious target" of 5,000 megawatts to 10,000 megawatts of power from renewable energy. And it would cost in the range of $1.5 billion to $4 billion, said an article in the *World-Herald*.

Big Solar Step: Super-Efficient System Sets Record

[Yahoo News, Dec. 16] A new world record is making the future of solar energy look pretty bright. Researchers in Australia recently developed a solar energy system that can convert more than 40 percent of the sunlight that hits it into electricity — the highest efficiency ever reported for a commercially available photovoltaic system. The technology first achieved the record-breaking efficiency in outdoor tests in Sydney, Australia, and later at an outdoor test facility operated by the National Renewable Energy Laboratory (NREL) in Golden, Colorado, the primary lab for renewable energy and energy efficiency research in the United States. Martin Green, a professor at the University of New South Wales (UNSW) and director of the Australian Centre for Advanced Photovoltaics, led the research group that built the new energy system. This wasn't the first time Green and his team broke a world record for solar energy efficiency.

Kyocera To Develop One of World's Largest Floating Solar Power Plants

[PV-Tech.org, Dec. 22] Kyocera Corporation is to develop a 13.4MW floating solar power plant in Japan. Kyocera has teamed with Century Tokyo Leasing Corporation to create a joint venture, Kyocera TCL Solar, to develop the floating solar project. Kyocera TCL Solar will build, operate and maintain the plant, and Century Tokyo Leasing will provide project financing. Around 50,000 Kyocera modules will be installed on floating platforms manufactured by floating solar specialist,

Ciel et Terre. The water surface for the installation is the Yamakura Dam reservoir, Chiba Prefecture in Japan, and will be managed by the region's Public Enterprises Agency for industrial water services, after the agency sought developers to construct the floating solar power plant. Operations are scheduled to begin in March 2016, following negotiations with the Tokyo Electric Power Company. Once online, the solar power plant will generate 15.6GWh a year. According to Kyocera, the solar power plant will be the world's largest floating solar project once complete.

New Energy Star Tool for Homeowners to Save Money, Energy This Winter

[Sustainable Cities Network, Dec. 14] WASHINGTON, D.C. – The U.S. Environmental Protection Agency has launched its Energy Star Home Advisor, an online tool designed to help Americans save money and energy by improving the energy efficiency of their homes through recommended, customized and prioritized home-improvement projects. "As we enter the winter months, homeowners can use our new Energy Star Home Advisor to increase energy efficiency and save money while reducing greenhouse gas emissions that fuel climate change," said EPA Administrator Gina McCarthy. "When homeowners take advantage of this important tool and increase the energy efficiency of their homes, many families will notice savings on energy bills and improvements in the comfort of their homes."

United States Installs 1,354MW of Solar in Third Quarter 2014

[T&D World Magazine, Dec. 17] Continuing its strong growth, the United States installed 1,354MW of solar photovoltaics in Q3 2014, up 41% over the same period last year. The numbers come from the latest edition of GTM Research and the Solar Energy Industries Association's (SEIA) U.S. Solar Market Insight Report. According to the report, Q3 was the nation's second largest quarter ever for PV installations and brings the country's cumulative solar PV capacity to 16.1GW, with another 1.4GW of concentrating solar power (CSP) capacity. Solar is proving to be an important and growing source of new generating capacity for the United States. Through the first three quarters of the year, solar represents 36% of new capacity to come on-line, up from 29% in 2013 and 9.6% in 2012. "Solar's continued, impressive growth is due, in large part, to smart and effective public policies, such as the solar Investment Tax Credit (ITC), Net Energy Metering (NEM) and Renewable Portfolio Standards (RPS)," said Rhone Resch, SEIA president and CEO. "By any measurement, these policies are paying huge dividends for America. Every three minutes of every single day, the U.S. solar industry is flipping the switch on another completed solar project, benefitting both our economy and the environment." The report tracks installations across three market segments: utility-scale, residential and non-residential which includes commercial, government and non-profit installations.

ENERGY/GENERAL

A Natural Gas Future?

What Are the Concerns Around Today's Abundant Supply of Natural Gas?

[Transmission & Distribution World, Dec. 18] In recent years, U.S. natural gas production has soared while prices have fallen. According to the Energy Information Administration (EIA), production increased almost 36% from 2005 to 2013. EIA also reported that prices for natural gas used for electric power fell from $12.41 per 1000 cu ft (28 cu m) in June 2008 to $4.25 per 1000 cu ft in August 2014. According to the EIA, the future for natural gas production looks bright, as well. In its "Annual Energy Outlook for 2014," the EIA forecasted natural gas production to increase 56% from 2012 through 2040. Additionally, technically recoverable natural gas resources in the U.S. are currently estimated at 2431 trillion cu ft (69 trillion cu m), up 52% over previous 2005 estimates. With low fuel costs, lower capital costs for natural gas plants and looming Environmental Protection Agency (EPA) carbon rules, electric utilities have been increasingly moving to gas. The EIA estimates that natural gas will surpass coal for electric generation by 2035. Recognizing that "natural gas is also the fuel most often used to replace older coal-fired generation as it is retired," the EIA also estimates that natural gas consumption in the electric sector will grow by 33% when compared to 2012 numbers. Everything's good, right? Natural gas is the low-cost, low-carbon fuel that bolsters the sagging central plant utility business model and keeps dreaded distributed generation new comers at bay for years to come. Maybe so, maybe not. Even a cursory look at the historical prices for natural gas reveals a level of volatility with which most utilities would not be comfortable. What are the concerns around today's abundant supply of natural gas? The first concern deals with where most of the new gas is coming from. The recent growth in U.S. natural gas production (and domestic oil, as well) has come from the exploration of hydrocarbon-rich shale rock formations found in many areas across the country. Horizontal drilling combined with hydraulic fracturing (or fracking) techniques are used to extract oil and gas from these shale formations. While the technology has been around

for decades, and the oil and gas industry insists that it is safe, fracking has many opponents who are concerned about environmental impacts. If environmental concerns were to restrict shale gas production, it could impact supply levels and increase the price paid for natural gas by electric generators. This, in turn, would drive up the price of electricity.

Betting on the Need, Scientists Work on Lighter, Cleaner Nuclear Energy
[New York Times, Dec. 15] Idaho Falls, ID – Filled with pits, seams and fissures, the images that Darin J. Tallman examined in a secure laboratory here looked like the surface of Mars. But they were extreme magnifications of slivers of an odd new material — half metal, half ceramic — that tolerates high heat with ease, and that several companies hope might form the basis of a new reactor technology. Mr. Tallman's experiments are among many being conducted here outside Idaho Falls, in the high desert, far from population centers, in search of something that will drive the nuclear industry into its next incarnation. The industry has been in a slump. Old plants are unprofitable in the United States. In Germany, they are seen as an unacceptable safety hazard; their future in Japan is uncertain. Research has been in a slump, too. But many experts, as well as investors, say that for the world to meet rising demand for electricity and simultaneously reduce carbon emissions, nuclear power will have to be part of the mix.

Chevron Bows To Oil Volatility, Pulls Back on Arctic Drilling Plan
[Phoenix Business Journal, Dec. 18] Chevron Corp. has decided to hold off on a major drilling initiative in the Canadian Arctic due to recent volatile oil prices. Reuters reported that this is the largest drilling project to be put on the shelf due to plunging oil prices, which have dropped to about half of what they were six months ago. Chevron (NYSE: CVX) had been preparing to drill in the remote Northwest Territories since at least 2009, and had made plans for exploration that stretched into the next decade, that report added. The oil giant paid $103.3 million Canadian (a little more than $89 million U.S. if converting today) for rights to explore the region, Reuters said.

Job Losses Hit All But Renewable Energy Across Power Sector
[The Hill, Dec. 19] The electric power generation sector lost more than 5,800 jobs over the last three years, according to an Energy Department stat shop. The losses hit all energy sources across electric power except for renewables, the Energy Information Administration said on Friday. The non-hydro renewable electricity sector, which includes wind and solar, gained roughly 1,800 jobs, EIA said.

No More Faking It: Companies Ditch Green Credits, Clean Up Instead
[Bloomberg Businessweek, Dec. 17] It has been a near-magical tool allowing corporations to claim massive reductions in greenhouse gas emissions for very little cost. For years, thousands of companies have purchased renewable energy credits, known as RECs, to say they use green power and to shrink their carbon footprints. Now, as skepticism mounts about whether RECs achieve their claimed environmental benefits, the market for these credits is slowing—and a number of companies, from Whole Foods Market (WFM) to McDonald's (MCD), are quietly scaling back their involvement. "These voluntary green power markets have no significant effect on how much renewable energy is generated," says Michael Gillenwater, executive director of the nonprofit Greenhouse Gas Management Institute, which trains companies on how to accurately measure their emissions.

INDUSTRIES AND TECHNOLOGIES

Capturing Carbon as a Byproduct of Running a Fuel Cell
[New York Times, Dec. 14] DANBURY, Conn. — The more that engineers look, the more they find unexpected ways to capture carbon dioxide, a gas that scientists say threatens global climate stability. Until now, most efforts to capture carbon have been expensive, in dollars and in energy. A coal-fired power plant that grabbed carbon before it escaped into the atmosphere would lose an enormous portion of its energy output in the process. But as the strict new federal rules on carbon emissions take shape, technology is racing to find new ways. One novel approach is being demonstrated at a laboratory here, where engineers say carbon capture could be a cheap byproduct of running a fuel cell. Deep inside a tangle of pipes, tanks, heat exchangers and miniature electrochemical reaction chambers, a fuel cell has been silently turning out electricity around the clock for about five months using a process in which one stage gives off carbon dioxide and another stage absorbs it.

Getting Microgrids Right: NREL Partners on Advanced Technologies
[Smart Grid News, Dec. 17] The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) is working with both the Electric Power Research Institute (EPRI) and

General Electric (GE) on separate new projects to continue perfecting microgrids to the point where they can be reliably used by cities and communities to provide power backup during storms or other electric service interruptions. Microgrids, at one time thought of as having limited applications, are getting better, cheaper and more sophisticated. Some are in use, typically in a field trial setting. However, the technologies involved are still being tested and enhanced. Backed by DOE grants of $1.2 million each, EPRI and GE are both working on their projects at NREL's Energy System Integration Facility (ESIF). The facility's equipment enables manufacturers and researchers perform tests under real-life conditions to check how well their systems perform before they reach the marketplace.

Solar Paired with Batteries To Reach $1 Billion in U.S. by 2018

[Bloomberg, Dec. 18] Demand for rooftop solar paired with energy storage systems will reach $1 billion in the U.S. within four years, according to the Solar Energy Industries Association. About 318 megawatts of solar-storage capacity will be in operation in the U.S. by 2018, the Washington-based industry group said today in a report produced with GTM Research. Combining solar panels with batteries means users can store power during the day and use it at night, reducing electricity bills. Those savings can be more significant for customers who pay higher rates for electricity during peak periods, Shayle Kann, senior vice president of GTM Research, said in an interview. So-called time-of-use pricing is typically more common now among commercial users. The report measured systems that are connected "behind the meter" to the power grid, allowing households to sell energy back to utilities when their panels are producing a surplus. Such setups will become more common with commercial customers as well, Kann said. The biggest market for solar-with-batteries will be California, followed by New York and Hawaii, Kann said. These states have relatively strong solar markets, high electricity prices and policies that may spur demand for energy storage. California, for example, has mandated that the state's three main utilities procure 1.3 gigawatts of storage capacity by 2020.

LEGISLATION AND REGULATION

China Criticizes Steep U.S. Tariffs on Solar Panels

[New York Times, Dec. 17] HONG KONG — China's Commerce Ministry strongly criticized on Wednesday afternoon the United States' decision to impose broader antidumping and antisubsidy tariffs on solar panels from China, but stopped short of threatening specific retaliation. Solar panel manufacturing "is a strategic emerging industry related to global sustainable development," the ministry said in a news release, adding that, "China urges the U.S. to solemnly consider the serious consequences caused by the U.S. ruling, to strictly comply with international rules and regulations, and to adopt a responsible attitude and behavior to appropriately manage trade frictions." The new tariffs, announced Tuesday by the United States Department of Commerce, include antidumping duties of 26.71 percent to 78.42 percent on imports of most solar panels made in China, and rates of 11.45 percent to 27.55 percent on imports of solar cells, a key component, that are made in Taiwan. In addition, the department announced antisubsidy duties of 27.64 percent to 49.79 percent for Chinese modules. The decision was intended in part to close a loophole that had allowed Chinese manufacturers to avoid tariffs imposed in an earlier ruling by using cells made in Taiwan.

Duties Set by U.S. on Imports of China, Taiwan Solar Goods

[Bloomberg, Dec. 17] The Obama administration will set duties on solar products from China and Taiwan that combined could exceed more than 200 percent, adding fuel to a renewable-energy clash between the U.S. and China. The Commerce Department also finalized its plan to include in the tariffs any solar panels assembled in China, no matter the origin of the cells. The department issued final duties on solar cells manufactured in China and Taiwan in a case brought by SolarWorld AG (SWVK), a German company with a factory in Oregon. The U.S. International Trade Commission must rule in the last step before the tariffs are finalized. A decision is due next month. SolarWorld, based in Bonn, persuaded the Commerce Department in 2012 to apply tariffs on imports of solar cells from China. After the tariffs kicked in, imports of panels with cells made in Taiwan boomed, and SolarWorld a year ago said Chinese makers had shifted production to skirt the U.S. tariffs.

E.P.A. Issues Rules on Disposal of Coal Ash To Protect Water Supply

[New York Times, Dec. 18] WASHINGTON — The Environmental Protection Agency on Friday announced the first federal guidelines for disposing of coal ash, instructing power plants to implement safeguards against contaminating nearby water supplies. But the agency did not require many of the restrictions that had been urged by environmentalists and other advocates, who point to studies showing coal ash — the material that remains when coal is burned to

produce electricity — contains a significant amount of carcinogens. “This rule is a pragmatic step forward that protects public health while allowing the industry the time it needs to meet these requirements,” said Gina McCarthy, the E.P.A. administrator. The E.P.A. declined to designate coal ash a hazardous material, but said power plants would have to meet certain minimum structural standards for landfills and disposal ponds, and monitor them for leaks. If a breach is discovered, it will be the utility company’s responsibility to reinforce or close the pond. New ponds and landfills will have to be lined to provide a barrier against leaks. Controls must be used to prevent people from breathing in coal ash dust. Power plants will also have to report the results of their inspections on a public website. The rule provides little oversight, leaving it to citizens and the states to sue if power plants are suspected of not adhering to the E.P.A.’s guidelines. The rule is a victory for electric utility companies and the coal industry, which had decried the increased financial burden that would have been placed on companies to revamp their existing disposal facilities if the E.P.A. had decided to phase out ponds and impose other, stricter guidelines.

IEA Finds US Energy Policy Improved in Latest In-Depth Review

[Oil & Gas Journal, Dec. 19] Washington, D.C. – US energy policies have come into sharper focus in the last six years, the International Energy Agency said in its latest periodic review. It specifically cited the US Department of Energy’s establishment of a Quadrennial Energy Review and US President Barack Obama’s strategy to address climate change as major steps since 2008. “Six years ago, we said the United States needed a more consistent national energy policy,” IEA Executive Director Maria van der Hoeven said during a Dec. 18 briefing on the review at the Bipartisan Policy Council. “The [QER] and climate change policies addressed these concerns.” “Energy Policies of IEA Countries – The United States (2014 Review)” also acknowledged that the US oil and gas renaissance, driven by strong unconventional production growth, has substantially contributed to domestic economic growth and improved the nation’s ability to compete globally. Significantly increased US oil and gas production also has raised environmental and safety concerns that need to be addressed, it added. The report’s recommendations were mainly directed toward developing demand-side measures and energy efficiency policies, particularly for transportation and building construction, and fiscal incentives to increase investor confidence in renewable technologies.

In Final 2014 Push, Congress Renews Tax Breaks

[New York Times, Dec. 17] WASHINGTON — Banks, retailers, commuters and teachers will keep their temporary tax breaks for another year after Congress gave final approval Tuesday to a massive tax package affecting millions of businesses and individuals. The last-minute bill would extend the expired tax breaks through the end of the year, enabling taxpayers to claim them on their 2014 tax returns. Beyond this year, their fate will once again be uncertain.

Proposed Policy Would Require Portland Buildings To Report Energy Use

[Energy Manager Today, Dec. 22] Energy costs for commercial buildings in Portland, Oregon, are currently $335 million per year. The Portland Business Journal reports that the city is considering a policy that would require commercial buildings over 20,000 square feet to track and report their energy use. The Bureau of Planning and Sustainability (BPS) introduced the proposal in a bid to build awareness in the commercial building sector about energy performance. If implemented, the policy would require commercial buildings to use the Energy Star Portfolio Manager to track energy performance. Commercial building owners would be required to report their energy use annually.

Regulators Want To Change Energy Pricing Rules for Federal Land

[The Hill, Dec. 19] Federal land managers will release proposed rules next month to change the pricing structure for oil, natural gas and coal leases on public land. The proposed rules are the key part of an effort the Interior Department has taken in recent years to better ensure that it is getting fair prices for federal energy resources. It comes after watchdog agencies, lawmakers and outside groups have criticized Interior for not properly accounting for environmental harm in its leasing programs and giving away energy resources for bargain prices. Current oil and gas valuation rules are more than two decades old and coal rules are a decade old, Interior said Friday. The coal rules would also apply to American Indian land.

WESTERN POWER

Energy-Storage Plans Gain Ground in California

[New York Times, Dec. 21] In an unusual competition in California, proposals for energy storage systems beat out hundreds of bids to construct new power plants as a way to meet peak power needs. Southern California Edison has retired its San Onofre nuclear reactors and is planning to

retire natural gas units with environmentally troublesome cooling systems. So it invited proposals for storage — including conventional batteries and giant ice packs — and new gas-fired power plants. To the surprise of the utility and even the storage companies, in many cases storage won. Demand response, or agreements with customers who volunteer to be unplugged at certain times, also did well. Looking for 2,221 megawatts of capacity, about the size of two big nuclear plants, the utility selected 264 megawatts of storage, a huge amount for what is still viewed as a fledgling technology.

Irrigation District Wants To Take Local Power Lines, Transformers
Pacific Gas and Electric the target
[Fierce Energy, Dec. 17] It may sound like a strange thing to contemplate: A small irrigation district wants to get into the electric utility business, but plans to take local Pacific Gas & Electric (PG&E) power lines and transformers to do it. And this is not the first time -- the South San Joaquin Irrigation District tried the same tactic eight years ago. The water district won approval from the Local Agency Formation Commission last week to sell power to 38,000 local residents. But it plans to do it in an unusual way. As a story in the *San Francisco Chronicle* explained, the district intends to take PG&E's electric delivery infrastructure. The district is willing to buy the equipment -- or take it by eminent domain. When the district made a similar attempt in 2006, the Local Agency Formation Commission refused. Now the district has permission to sell electricity, provided it can sell power for 15 percent less than PG&E. In the article, the utility said the irrigation district's plan "poses significant risks to the safety, reliability and affordability of retail electric service for our customers." Needless to say, the utility does not want to sell its infrastructure to the district.

Nevada Power Moving Toward Ending Reliance Coal by '19
[Las Vegas Review-Journal, Dec. 17] CARSON CITY — A long-term plan that will allow Nevada Power to permanently end its reliance on coal-generated electricity by 2019 was approved Wednesday by the Nevada Public Utilities Commission and will be accepted by the utility, NV Energy CEO Paul Caudill said. This comes despite the disappointing decision by the commission to reject a modified solar project proposed for the Moapa River Paiute Indian Reservation, he said. The solar project on the reservation was shovel ready and would have provided power to the company's customers by the end of 2016, Caudill said. It would have created several hundred construction jobs and helped economic diversification efforts by the tribe, he said. "We still believe that renewable energy will play a significant role here, especially with utility-scale renewals," Caudill said. "We felt it was a strong, good project that was ready to go." Utility-scale solar projects are an effective way to reduce greenhouse gases, provide a mix of resources and help with price stability, he said.

Pacific Gas and Electric Credits Smart Grid Technology for Speedy Power Restoration
[Smart Grid News, Dec. 16] A storm that ripped through the Bay Area and outlying areas last week caused a power outage affecting at least 500,000 Pacific Gas & Electric customers. However, power was restored for most of them by Friday and smart grid technologies were credited with being instrumental in the quick response. Restoration crews from PG&E plus contractors from Oregon were able to restore power to almost all affected Bay Area customers and those in northern and central California by Friday evening. PG&E said it was continuing to work on restoring power to about 17,000 customers in its service area by Friday night and had the lights back on for roughly 483,000 customers, according to a report in the Santa Cruz Sentinel. In the Bay Area, around 1,600 customers remained without power Friday evening, but had been restored to 233,00 in the area by that time.

Solar-Friendly Rate for Commercial Customers Adopted in California
[Energy Manager Today, Dec. 19] The California Public Utilities Commission approved Thursday a solar-friendly rate for medium and large commercial and industrial customers in the Pacific Gas and Electric Company and Southern California Edison's service territories. As part of the decision, the CPUC approved the Option R rate, which was proposed and supported by the Solar Energy Industries Association (SEIA) lobby group. The Option R rate would lower demand charges in exchange for higher energy rates, particularly during peak and part-peak hours.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

- **INCENTIVES**

Arizona has lowered taxes, streamlined regulations, and established a suite of incentives to

support corporate growth and expansion. The Arizona Competitiveness Package, groundbreaking legislation adopted in 2011, makes it easier for existing Arizona companies to prosper and establishes Arizona as one of the most desirable places for expanding companies to do business. Give your company a competitive edge by utilizing Arizona's incentives.

- Job Training
- Quality Jobs
- Qualified Facility
- Computer Data Center Program
- Research & Development
- Foreign Trade Zone
- Military Reuse Zone
- Angel Investment
- Renewable Energy Tax Incentive
- Healthy Forest
- Sales Tax Exemption for Machinery and Equipment
- Lease Excise
- Additional Depreciation
- Work Opportunity
- Commercial/Industrial Solar
- SBIR/STTR
- Private Activity Bonds
- QECB's

- **(ACA) PROGRAMS**

- **DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE)**

- Arizona Incentives/Policies
- Federal Incentives/Policies
- Solar Policy News
  DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- Community-Scale Air Toxics Ambient Monitoring (EPA-OAR-OAQPS-15-01) - Applications due January 5, 2015

- Accelerating Industry-Led Regional Partnerships for Talent Development (EDAREGIONALTALENT2014) – Applications due January 9, 2015

- Buildings Energy Efficiency Frontier & Innovation Technologies (BENEFIT) - 2015
  Close Date: 01/12/2015 Funding Number: DE-FOA-0001166

- Landscape Design for Sustainable Bioenergy Systems Department of Energy
  Close Date: 01/12/2015

- WaterSMART: Water and Energy Efficiency Grants for FY 2015 Funding Opportunity #:R15AS00002 Close Date: 01/14/2015

- Solid-State Lighting Advanced Technology Research and Development 2015
  Close Date: 01/15/2015

- Advancing Solutions to Improve the Energy Efficiency of U.S. Commercial Buildings
  Close Date: 01/20/2015

- Wood Innovations Close Date: 1/23/2015

- Buildings University Innovators & Leaders Development (BUILD) – 2015 Funding Opportunity #:DE-FOA-0001167 Concept Papers due December 19, 2014 Close Date: 1/28/2015
- NEW! Notice of Intent: State Energy Program 2015 Competitive Awards
- NEW! Environmental Workforce Development And Job Training (EWDJT) Grants (EPA-OSWER-OBLR-15-01) – Application Due Date: February 3, 2015
- NEW! Energy Innovation Hub Renewal-Fuels from Sunlight (DE-FOA-0001205) – Application Due Date: December 29, 2014
- NEW! Physics of Reliability: Evaluating Design Insights for Component Technologies in Solar 2 (PREDICTS 2) (DE-FOA-0001195) – Concept Paper due January 7, 2015
- Micro-scale Optimized Solar-cell Arrays with Integrated Concentration (MOSIAC) (DE-FOA-0001256) – Concept Paper due January 22, 2015
- Wood Innovations Programs (USDA-FS-WERC-2015) - Application Due Date: January 23, 2015
- Building America Industry Partnerships for High Performance Housing Innovation Funding Opportunity #:DE-FOA-0001117 Close Date: 02/04/2015
- NEW! Infrastructure Management and Extreme Events (PD-15-1638) – Application Due Date: February 17, 2015
- Choice Neighborhoods Implementation Grant Program (FR-5800-N-11) – Application Due Date: February 9, 2015
- NEW! Buildings University Innovators and Leaders Development (BUILD) - 2015 – Close Date 02/11/2014
- Powering Agriculture: An Energy Grand Challenge for Development (AID-SOL-OOA-00005) – Applications accepted between December 8, 2014 through February 12, 2015
- NEW! Student Program for Environmental Excellence in Design (SPEED) (EPA-OAR-OTAQ-15-02) – Application Due Date: February 22, 2015
- NEW! The Resilient Electricity Delivery Infrastructure (REDI) Initiative (DE-FOA-0001219) – Application Due Date: March 4, 2015
- NEW! Physics of Reliability: Evaluating Design Insights for Component Technologies in Solar 2 (PREDICTS2) – Close Date: 3/12/2015
- Sustainable and Holistic Integration of Energy Storage and Solar PV (SHINES) Close Date: 3/19/15
- NEW! Desalination and Water Purification Research and Development (DWPR) (R15AS00019) – Application Due Date: April 27, 2015
- NEW! Desalination and Water Purification Research and Development (DWPR) Pilot (R15AS00021) – Application Due Date: April 27, 2015
- NEW! American Apprenticeship Initiative (FOA-ETA-15-02) – Application Due Date: April 30, 2015
- Advanced Frontiers in Renewable Hydrogen Fuel Production via Solar Water Splitting Technologies – Letter of Intent due October 7, 2015
- NEW! Land and Water Conservation Fund State and Local Assistance Program – Application Due Date: 08/11/2015

- Landscape Design for Sustainable Bioenergy Systems (DE-FOA-0001179) – Concept Paper due November 21, 2015
- Repowering Assistance Program - Ongoing
- Rural Business Enterprise Grants - Ongoing
- Rural Business Opportunity Grants - Ongoing
- Sustainable Agriculture Research and Education Grants - Ongoing
- Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines
- U.S. Dept. of Agriculture - Rural Development Grant Assistance
- Green Refinance Plus – Ongoing
- National Science Foundation Funding Opportunities